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### Tracking devices

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## **Tracking devices: On the reception of a novel security good**

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### **Abstract**

In this paper, we describe and make sense of the reception of a novel security good: namely, the personal GPS tracking device. There is nothing new about tracking. Electronic monitoring is an established technology with many taken-for-granted uses. Against this backdrop, we focus on a particular juncture in the ‘social life’ of tracking, the moment at which personal trackers were novel goods in the early stages of being brought to market and promoted as *protective* devices. Using data generated in a wider study of security consumption, our concern is to understand how this extension of tracking technology into everyday routines and social relations was received by its intended consumers and users. How do potential buyers or users of these novel protective devices respond to this novel security object? What is seductive or repulsive about keeping track of those for whom one has a duty or relationship of care? How do new tracking technologies intersect with – challenge, reshape or get pushed back by – existing social practices and norms, most obviously around questions of risk, responsibility, trust, autonomy and privacy? This paper sets out to answer these questions and to consider what the reception of this novel commodity can tell us about the meaning and future of security.

### **Keywords**

Consumption, electronic monitoring, risk, security, tracking

People tracking, okay; it still isn't mainstream and I don't see it becoming mainstream for a long time.

*(Founder, GPS tracking company 1)*

### **Introduction: A Moment in the Social Life of Tracking**

In this paper, we describe and make sense of the reception of a novel security good: namely, the personal GPS tracking device. There is, of course, nothing new about tracking. Electronic monitoring is an established technology with many taken-for-granted uses. Our focus in this paper is on a particular moment in the ‘social life’ of tracking (Appadurai, 1986), the moment

at which personal trackers were novel goods in the early stages of being brought to market and promoted as *protective* devices. Our concern is to understand how this extension of tracking technology into everyday routines and social relations was received by its intended consumers and users, and to consider what the reception of this novel commodity can tell us about the meaning and future of security.

The paper is drawn from a larger empirical study of the social meanings of security consumption, the fieldwork for which was conducted in the UK from 2007-2009. It focuses on the element of that study whose aim was to understand the promotion, reception and fate of novel security goods (Goold et al. 2011: 20-22). To this end, the paper is based on a close reading of marketing materials produced by companies selling GPS trackers and on interviews with senior personnel from eight of these companies. We also draw on material from four focus group discussions and 12 in-depth individual interviews in which respondents were invited to offer and discuss their views on, and any experiences of, tracking technologies. In addition, we spoke to representatives from 10 organizations that acted, or refused to act, as intermediaries for tracking products. Finally, we initiated a discussion on GPS trackers for children on an online forum for parents and analysed their reception in the media.<sup>1</sup>

Personal GPS trackers were developed against a backdrop of established uses of tracking technology. Over recent decades, the use of electronic tracking devices has become increasingly common in North America and throughout much of Western Europe. First patented in the United States in 1973, Radio Frequency Identification (RFID) chips are now used by many companies as a cheap and effective means of tracking the movement and delivery of goods, as well as cash-in-transit and even livestock. Property marking has become a key ingredient of neighbourhood watch schemes. Pet owners 'chip' their cats and dogs so that they can be traced back to them if lost or stolen. Chips are often placed in high value cars. In short, the protective marking and electronic tracking of valued goods has become commonplace and uncontroversial.

Since the late 1980s, electronic monitoring has also been extended to individuals, serving as an alternative to more traditional forms of punishment such as prison, or as a standalone punishment (see, generally, Nellis et al., 2012). In the United Kingdom, for example, electronic tagging is frequently used as a condition of bail, a type of limited custodial sentence, or as part of early release from prison. Administered under contracts with government by security companies such as G4S and Serco, the tags require offenders to stay in a specific location at specific times, and alert supervisors if the individual fails to comply with the conditions of

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<sup>1</sup> A fuller account of the theoretical orientations, substantive concerns and methodology of the overall study can be found in Goold et al. (2010). The project was funded by the Leverhulme Trust whose support we gratefully acknowledge.

their curfew or early release.<sup>2</sup> Although this spatial regulation of offenders was initially seen by some as a disturbing shift towards a dystopian Big Brother society, as Nellis (2011) notes, these worries have quickly given way to mundane concerns about (in)effectiveness and under-enforcement. Electronic tags have, he suggests, 'come to be seen as "useful tools" in community supervision' (ibid. 160).

With the advent of forensic tracer liquids, it has now become possible to combine the protection of goods with the identification of offenders. These 'forensic solutions' (produced and sold in the UK by three main companies) give each item of marked property a unique chemical identifier that promises to deter potential offenders (through the visible display of warning signs) and assist in tracing stolen goods. These companies also offer to protect locations using a unique and invisible ultra-violet dye that 'brands' intruders, marking their bodies with evidence that links them to the crime scene. These products are wedded to a crime control strategy that depends on what one company representative we interviewed called 'the buy-in of the police.' In his view, the challenges for the company are to ensure that 'UV detectors [are] in the charge office', to get 'Police and Community Safety Officers going round second-hand dealers checking with UV lamps' and generally to encourage potential clients and the police to see these new products as a means of waging 'psychological warfare' on offenders. Forensic tracer liquids bring together the tracking of property and suspects in novel ways, albeit in a form that gives a technological impetus to established crime control paradigms of deterrence, detection and prosecution.

The advent of personal trackers was made possible by the transition from RFID to GPS technology (which has since become ubiquitous in vehicle Sat-Navs). But its novelty as a product lies in the prospect of extending tracking technology beyond objects and offenders and embedding it more widely in the regulation of social relations. In particular, it involves an attempt to persuade consumers to purchase and use GPS trackers to monitor and protect those *towards whom they have a duty or relationship of care* (Rooney, 2010: 345). At the time of our research, such devices were being marketed to employers with a responsibility for the protection of vulnerable workers, to health organizations and carers looking after elderly patients with dementia, and to parents concerned with the well being and whereabouts of their children. As we shall see in more detail below, a cognate promotional claim was made in each case: that a new technology exists that can enable employers, carers or parents to exercise their responsibilities more effectively. Equipped with GPS trackers, employers can discharge their legal duty of care to workers placed in vulnerable situations (social workers, midwives, taxi-drivers, estate agents etc.) by using a product that combines location detection and human support in ways that demonstrably outperform the mobile phone. Carers are able to offer autonomy to dementia patients in their charge while discretely ensuring that they are

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<sup>2</sup> They do not, in other words, engage in the live tracking of offenders using GPS technology, although such schemes have been piloted in England & Wales (Shute, 2007). The active, real-time monitoring of offenders is common in the USA.

safe. Parents are able to square the circle of giving their children greater freedom outside the home while enjoying the peace of mind that comes from knowing exactly where they are using cell or GPS technology.<sup>3</sup>

How though do potential buyers or users of these novel protective devices respond to such claims? What is seductive or repulsive about keeping track of those for whom one cares? How do new tracking technologies intersect with – challenge, reshape or get pushed back by – existing social practices and norms, most obviously around what it means to be a ‘responsible’ employer or a ‘good’ parent? This paper is concerned with these questions. In the following two sections we deal, in turn, with the promotion and reception of trackers for vulnerable workers and for children. In conclusion, we consider the wider significance of our analytic focus on the consumption of a novel security technology, and our central finding that the purchase of personal GPS trackers is shaped less by crime risk than by legal regimes and cultural values.

### **Protecting Vulnerable Workers?**

During the period of our research, several security companies were in the early stages of developing and marketing GPS protection devices for use by lone or vulnerable workers. These devices make use of satellite navigation technology to pinpoint the wearer’s location, and rely on mobile phone networks to connect the user to a response team in a remote call centre. Typical features include an emergency alarm activated by pressing a button, a position locator, and a microphone that enables the user to communicate with the response team. Once activated, the device also records transactions and thereby creates evidence which may be used in any subsequent court or related hearings.

Because of the relative novelty of these products, none of the developers we spoke to had yet gathered – or were willing to disclose – information about users’ experiences or the effectiveness of the devices. The developers did, however, clearly identify a range of occupational groups who they believed to be likely end-users of the technology. These included ‘taxi’ and ‘bus drivers’, ‘pizza deliverers’, ‘estate agents’, ‘housing officers’, ‘drug workers’, ‘security guards’, ‘leaders of tourist expeditions’ and those perceived to be ‘at risk of tiger kidnaps’. They also encompassed workers in social care and health professions: ‘It will be [aimed at] social workers, district nurses, ambulance, paramedics, midwives, anyone who spends a lot of time working on their own or working in a high risk situation’ (*founder, tracking company 2*). However, the potential end-users in each of these occupational groups are not the intended buyers of GPS tracking devices: they will be purchased on their behalf by their

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<sup>3</sup> Though we collected a limited amount of data on people’s responses to the use of this technology in respect of elderly Alzheimer’s patients, for reasons of space the analysis in this paper is focused on trackers for lone workers and children.

employers. This instance of indirect consumption was acknowledged by one of the company representatives we spoke to: 'We have two types of customers that we need to engage with – the actual users and then their employers. Because it is always the employer that buys the kit, buys the solution' (*founder, tracking company 3*).

The claim of the product developers is that lone worker tracking devices improve lone or vulnerable workers' sense of safety and security. As one developer put it, GPS trackers 'assist you in feeling safer to be able to do your job knowing that there's a backup if something does go pear shaped' (*representative, tracking company 4*). The key promotional point here is that GPS technology has features – ease of activation, human support, evidence gathering facilities - which have rendered obsolete existing forms of protective technology, notably the personal/shriek alarm and the mobile phone. In this context, one developer recounts his attempts to persuade potential customers of the limits of the mobile phone as a form of protection for lone workers: 'Put yourself in a scenario where you are one-to-one with a person who's being difficult, or trying to rob you, or is just abusive. How can you possibly use your phone? It's very often in a bag or a pocket. And there were a number of people who had been in situations where they tried to use their phone and that in itself had increased their risk. On a couple of occasions it actually turned the situation from verbal [abuse] into physical' (*founder, tracking company 3*). In contrast, he continued, 'the benefits we deliver to the user are ease of use, immediate access, total peace of mind, knowing that if I threaten you now, someone is listening and recording it'.

At the time of our research a couple of key factors were clearly contributing to the growth of what was still a market in its infancy. The first of these was a series of changes in the legal environment. Part of this had to do with the generic effects of health and safety legislation coupled with what was perceived to be a shift in cultural attitudes to assessing and mitigating risk at work. In this context, one NHS Trust manager - whose organization had just invested in the 'Identicare' lone worker protection system - estimated that security spending had 'increased 100 times due to litigation' during her 20 years in the service:

The teams out in the community are now dealing with people that ten, 15 years ago would have been admitted to hospital. So they're now dealing with people that are unwell in their own homes so they need to be kept safe, and obviously the patients that they visit need to be kept safe, hence we give people personal alarms, people have got mobile phones, the systems are in place. Risk assessments are far more pertinent than they used to be.

The more recent and specific legal impetus to the growth of the protection device market was the Corporate Manslaughter and Corporate Homicide Act 2007, legislation that exposes employers to potential criminal prosecution if there has been a 'gross failing', throughout the organisation, in the management of health and safety with fatal consequences. Several of our interviewees noted the effects of this change in the legal landscape – a shift that has clearly

given tracking companies a point of leverage in their efforts to market GPS protection devices. One tracking company director spoke of personal managers who approach him claiming: “‘I have a problem. I need to make sure we’re covering our duty of care correctly”. They are looking for things like trackers’. A representative from the Royal College of Nursing spoke in similar terms about the Act’s impact: ‘Any time you’re threatened with jail, you are going to speed things up. So we are speeding up work in this area’. Another tracking company founder made the same point more bluntly: ‘The only law with any teeth that’s actually made company bosses sit up and take notice in terms of their own staff welfare and their duty to others is corporate manslaughter’ (*founder, tracking company 4*). The cumulative effect of these legal changes was summed up by a member of the Suzy Lamplugh Trust as follows:

Staff won’t stay if they find working practices are pretty awful. The fact that companies are sued when people go, or go off with stress; claims against organizations for stressful working have increased over the years. And now corporate manslaughter has really woken up people at the top. Bit by bit legislation does make a difference.

The second noteworthy aspect of the market for GPS lone worker protection concerns the role played in its early expansion by various organizations who serve as ‘intermediaries’ between developers and their customers. In addition to ensuring that they are able to construct the ‘right’ narrative around their products, companies that manufacture and sell tracking devices must also obtain the cooperation of institutions who can affirm the acceptability and necessity of the product and thereby shape its diffusion (Molotch, 2005: ch. 5). Pressure groups like the Suzy Lamplugh Trust have clearly played an important agenda- and climate-setting role in respect of lone worker safety, albeit that they do not endorse specific products and take issue with the idea that ‘if we can have a piece of technology we’ve solved the problem’ (*representative, Suzy Lamplugh Trust*).<sup>4</sup> The police also serve as symbolically powerful mediators of the market for GPS protection. Providers are keen to demonstrate that their products are – if not formally endorsed by the police – then are at least compliant with the standards established by their Secured by Design programme.<sup>5</sup> One company founder (proudly) informed us that his product had won the ‘First ACPO award the application of technology to public safety’ (*founder, tracking company 3*) and ‘endorsements’ of this sort feature routinely in companies’ sales pitches. Significantly, several company representatives we interviewed spoke of the role played by ACPO in highlighting the merits of GPS trackers over the mobile phone: ‘The Association of Chief Police Officers is saying a mobile phone can’t do the same as the stand alone device. They’ve endorsed that and they’ve said that a mobile phone from the legal aspect cannot be a lone working device’ (*representative, tracking company 4*). He continued:

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<sup>4</sup> <http://www.suzylamplugh.org/> [accessed 2 July 2013]

<sup>5</sup> <http://www.securedbydesign.com/> [accessed 14 June 2013]

All the indications coming out from the Health and Safety side of things, from ACPO and all the other routes, they're suggesting that to fully protect your lone workers to the particular extent that you would be expected, you require a lone worker protection device.

Unions and professional bodies also play an important role in fostering a climate of acceptance for GPS protection for their members. One tracking company founder we interviewed was explicit about this: 'Unions are good allies to have. We've worked with UNISON and UNITE and a couple of smaller unions to just raise the profile. We tend to use the unions to say "Mr Employer, you can't get away these days with saying there is nothing I can do about it because there is something you can do about it"' (*founder, tracking company 3*). In this context, the Royal College of Nursing (RCN) has directly contributed to the diffusion of GPS tracking devices by commissioning a survey of lone workers and campaigning for government funding for their protection (including the acquisition of trackers). In so doing, they have not only helped open up the market for tracking devices among health workers, but also assisted in reformulating employers' responsibilities towards staff. In 2007 the organization commissioned a study of the challenges faced by nurses working in the community, with a focus on 'the extent to which these "lone workers" felt at risk, their experiences of assault and abuse, whether they had been provided with technology aimed at reducing risk and how incidents had been handled' (Smith, 2007). According to their website, 'the RCN used information from this survey to successfully campaign for government funding to improve the protection of nurses working alone. A number of employers across the UK have now invested in lone worker protection devices for their health care staff.'<sup>6</sup> In 2011 a new survey was carried out, this time with support from 'Reliance High-Tech Ltd and Connexion2 (the organizations awarded government contracts to provide lone worker solutions to the NHS).' Based on the results, the RCN recommends that employers consider tracking devices as a preventive measure:

A significant number of NHS lone workers in England and Wales are benefiting from the roll-out of the government part-funded Identicom lone worker system, but there are many still without such protection. Only a fifth of respondents had been offered the use of an Identicom device (or similar). Mobile phones are the most commonly used lone worker system, although NHS Protect recognized they are not as effective as a dedicated lone worker device when faced with a difficult situation.

The paragraph ends with a quote from one respondent to the survey who reported: 'Identicom-type systems are easier to activate than a personal alarm at the bottom of a bag or trying to make a mobile phone call.'

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<sup>6</sup> [http://www.rcn.org.uk/\\_data/assets/pdf\\_file/0007/424177/004192.pdf](http://www.rcn.org.uk/_data/assets/pdf_file/0007/424177/004192.pdf) [accessed 14 June 2013]



There are then clear indicators suggesting that GPS trackers have gained a foothold as a means of protecting lone or vulnerable workers. There remain, however, several obstacles to the further diffusion of the product. One of these is what one company representative called the 'cultural barrier' people have to the idea of being tracked, something he could not see 'changing for a while anyway'. He continued: 'I don't won't to be tracked. I run a tracking company and I wouldn't wear one of these [devices] myself' (*founder, tracking company 4*). A second obstacle is the perception that customers will not switch to GPS tracking in large numbers until the new corporate manslaughter provisions have been tested in law: 'Somebody needs to be prosecuted under the Act before it will make a big difference' (*founder, tracking company 5*). A third impediment to growth is the suspicion that tracking devices may all too easily be turned from an instrument of care and protection into a means of surveillance. GPS tracking is a double-edged technology: potentially a means of enhancing safety *for* employees but also a device which can enable closer and more intense monitoring *of* employees (see, generally, Ball, 2010; Sewell, 2012). In this context, one NHS Trust manager we interviewed stressed the importance of the 'individual activating the device', because 'they wouldn't take it out with them if they thought they were being tracked all the time'. But we also interviewed a tracking company representative who reported being in conversation with a city council over the possibility of tracking traffic wardens to ensure that they 'really are on their beat when they're supposed to be on their beat' (*founder, tracking company 5*) and other developers who acknowledged that their product had attracted customer interest precisely because it could monitor the performance of staff: 'It's sold to the worker as lone worker protection. But the reality is they use the information to sell to customers, to say "we are looking after your site and I can prove it, this is the route that my security guard took. We'll load the map and I'll show you"' (*representative, tracking company 4*). This usage of workplace tracking clearly raises serious issues and may yet stand in the way of the product's acceptance and diffusion. For now, however, this tracking company director was confident that, in respect of workplace trackers at least, a viable long-term market was in the process of being created:

I think five years on from today, and provided we have the support of the insurance companies and their interests and the police and their interest, you know the legislative position with corporate manslaughter, health and safety legislation continues along the path that it is currently going, then I think that it [GPS lone worker protection] does stand a good chance of becoming the norm.

(*Founder, tracking company 3*)

## Keeping Track of the Kids?

Your child going missing is every parent's worst nightmare. Even if they've just wandered off to another part of the park, the fear and panic is instant.<sup>7</sup>

In *Liquid Fear*, Zygmunt Bauman writes '[t]he dangers we fear most are immediate; understandably, we also wish the remedies to be immediate – "quick fixes", offering relief on the spot, like off-the-shelf painkillers. Though the roots of the danger may be straggling and tangled, we wish our defences to be simple and ready to deploy here and now' (2006: 114). There can be no more primal anxiety than that of a parent's fear of losing their child. The social circulation and force of such fears appear also to have intensified in recent decades, fuelled in part by the mediated visibility of – statistically still very rare – child abductions (recall the 'household cases' of James Bulger, Sarah Payne, Holly Chapman and Jessica Wells, and Madeleine McCann). These fears have, arguably, coalesced into an atmosphere of ambient risk surrounding parenting and childhood which additionally encompasses concerns about road safety and worries about children's generic vulnerability to criminal harm – whether as victims or perpetrators. One dimension of this is a marked shift in risk consciousness and the legal environment surrounding what has come to be known as the safeguarding of children (Parton, 2005). Another, it is claimed, is the advent of 'hypervigilance' (Katz, 2006) among parents and an attendant unwillingness to allow the young the freedom to roam that was permitted a generation or two ago – something that has, in turn, sparked a counter-anxiety about an over-protected and home-bound generation (Fotel and Thomsen, 2004; Valentine, 2004; Nelson, 2010).

These are the fears that producers of GPS trackers for children speak to and aim to alleviate (Marx and Steeves, 2010). At the time of our research, a small but growing number of companies were producing and marketing such devices in the UK. Some of these (such as a product which hides a GPS unit in a teddy-bear) were designed to guard against the situation where a young child goes missing in, say, a supermarket. For the most part, however, trackers were targeted at parents of older children or teenagers. These products typically embed GPS devices in (otherwise) 'cool' consumer goods – watches, wristbands, shoes, jackets, rucksacks – in an effort to overcome the fact that, as one developer put it, 'the child is one of the most challenging environments on which to attach a piece of technology' (*founder, tracking company* 3). These trackers typically either allow parents to place a 'virtual fence' around their (usually) teenager's movements (they are then notified if the 'perimeter' is breached) or else enable parents to engage in real-time monitoring of their teenager's whereabouts

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<sup>7</sup> <http://www.loc8tor.com/childcare> [accessed 21 May 2012]

using a mobile phone or computer.<sup>8</sup> As such, these products appear to offer the very ‘quick fix’, ‘off-the-shelf’ security solution to the fears and anxieties identified by Bauman.

This offer is evident from company marketing materials and our interviews with developers. In their attempts to persuade potential customers (and us) of the need for their product, company representatives and advertisements assume that parents seek – but are unable – to constantly monitor the whereabouts of their children in an increasingly dangerous world in which minors are routinely at risk of predators. One developer we interviewed referred to the ‘number of children that are reported missing every year in the UK’, which she estimated to be ‘one hundred thousand’, and the danger of unmonitored paedophiles potentially ‘standing at a school gate’ (*founder, tracking company 5*). Likewise, promotional materials play on the desire of consumers to reduce risk to a minimum, pointing out that ‘most parents do keep an eye on their children, but what we can’t protect against are those split second distractions, a noise, one of the other kids needing attention, that cause us to look away for an instant’.<sup>9</sup> The promise of this product is ultimately the possibility of eliminating concern altogether:

What if you didn’t have to worry? What if you could know where your child was or that they were not where they should be? Loc8tor child safety products will help give you peace of mind and act as an extra set of eyes to look out for your child. It will also give them a little more freedom to play and explore safely<sup>10</sup>

The Chief Executive of a firm selling GPS wristwatches echoes this, promising to square the circle of contemporary parental anxieties: ‘Only 20% of children are allowed to go out and play. It is my profound hope that Num8 will help parents feel more comfortable about letting their children go out’.<sup>11</sup> Or, as this the marketing material for KidsOK more emphatically put it:

It’s every parent’s dream. A way of keeping track of their children. Twenty four hours a day. Seven days a week. Without – a key issue with children today – embarrassing them.<sup>12</sup>

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<sup>8</sup> The focus here is on the monitoring of children’s physical movements and location. Tools for the surveillance of children’s digital lives, for example, the websites they visit or the people they befriend on Facebook are a growing market. While parental control software tools were not part of this research, our findings may apply to their consumption, as they raise similar issues around privacy and trust (see, generally, Livingstone 2009).

<sup>9</sup> <http://www.loc8tor.com/childtrackers> [accessed 14 June 2013]

<sup>10</sup> Ibid.

<sup>11</sup> <http://www.guardian.co.uk/technology/2009/jan/12/num8-gps-wristwatch-child-security> (accessed 14 June 2013)

<sup>12</sup> <http://www.hopewiser.com/case-studies/kids-ok/> [accessed 14 June 2013]

The GPS tracker comes to the service of time-strapped, physically absent parents, and seeks to redefine the notion of responsible parenting. The story of the product developed by one company whose founder we interviewed is that as a responsible mother she can check on her children while also holding down a demanding job. Being able to locate her daughter on a screen using the GPS device she carries – which will tell her if she has arrived home from school, for example – eliminates the need for a time-consuming phone call. This developer suggested that the market for GPS trackers has in part been created by – and is going to be most fertile among – working mothers. ‘Increasingly’, she said, ‘parents are working so they’re not at home with the child. We’re not always there for our children’. What follows is an implication that failing to purchase a locator device is less than fully responsible: old habits and technologies such as accompanying the child, sharing care responsibilities with other people, teaching one’s children street-skills, taking kids to trusted areas or learning to live with uncertainty, are no longer sufficient to keep parents at ease or children safe from harm. The message is that once the GPS tracker is available, with all its risk reduction potential, parents are culpable for not doing all that is in their power to protect their children. As the Loc8tor website puts it: “How will you choose to protect your family?”<sup>13</sup>

But what kind of social traction do these novel ways of protecting one’s children generate? Will parents buy and use them to achieve a better balance of autonomy and protection for their children? What aspects of the cultural structure may make GPS trackers seem desirable to some and simply ‘out of the question’ for others (Wherry, 2012)? How do trackers intersect with – and reinforce or challenge – attitudes towards risk and (good) parenting? At the time of our research, there had been little by way of mainstream advertising for GPS trackers and we often found ourselves, as researchers, introducing these products to our interviewees (and hence also inadvertently ‘marketing’ them).<sup>14</sup> Having done so, however, some among our respondents expressed supportive feelings towards this novel protective device. These positive responses typically highlighted peace of mind and feelings of control set against what was perceived to be ‘a normative horizon of lost security and broken trust’ which left people with ‘wounded images of a life worth living’ (Beck, 1992: 28). Technological advances that can help protect loved ones were most welcome among participants who expressed a desire for greater mastery over today’s risks and who were searching for ways ‘to relieve the anxiety that’s mounting up’ regarding their children’s whereabouts (*mother of six children*). In the view of this interviewee, ‘for an awful lot of parents it [the tracking device] would probably be a very useful help to them’, because, ‘when my children first had mobile phones it was a liberation, I mean it really was because I could find them’. Peace of mind was also the main

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<sup>13</sup> <http://www.loc8tor.com/childtrackers> [accessed 14 June 2013]

<sup>14</sup> The developers we spoke to often remarked that media stories about this (strange and intriguing) new product served as their best – and free – form of advertising. They also reported a spike in such stories, and interest in their products, following the disappearance of Madeleine McCann in May 2007. One developer reported that, for his company, the case produced ‘loads of hits on the website, lots of visits, lots of media attention.’ ‘But’, he adds, ‘the sales didn’t change’ (*founder, tracking company 3*).

attraction for the mother of a three-year-old who explained to us that she ‘would love to feel that I could just have that extra security if I could . . . I find that a very reassuring thing to have’.

Positive attitudes towards tracking tended to be informed by the belief that Britain is a more dangerous society than it used to be. According to the mother of a three-year-old we interviewed: ‘We have to be much more aware of them. I mean, things are so different now. When we were all young, you could just play out on the street and leave your front door open for when the children come back in. I mean it’s just massively different now. I mean, you couldn’t possibly contemplate doing that now’. Another young woman opined that, ‘There are more dangers now towards the children than there was when I was growing up.’ Speaking in a similar vein, a woman whose children are older agreed:

When I think back, you know, I left the pram with children outside the house, you know, for them to get fresh air. And, nowadays, probably wouldn’t do it. I might not, no. Because you hear too much about cases of, well, abduction, I suppose.

Against this backdrop, another young woman had no doubts that she would keenly adopt a tracking device: ‘Definitely, especially after the Madeleine McCann case, it’s the children who are very precious to you. I would hate for anything to happen to my nephew and, in the future, my children. I’d be more than happy to give them tracking to place in their watch’. For many of those we spoke to the real promise of GPS trackers appeared to be a degree of reassurance and – most crucially – a sense that they were in control:

Again it’s just peace of mind isn’t it? . . . Your children are your children, I think you’d look after them by any means whatsoever because even if they just drift off on their own, you know, it’s nice to know there’s a peace of mind that you’d know where they are straight away. So I would use that, yes, no problem. (*Mother of two older children*)

The warm reception from these respondents notwithstanding, GPS trackers for children have not, at the time of writing, taken-off as a mass consumer product. Though exact sales figures are close to impossible to come by (we have tried repeatedly), the developers we spoke to conceded that trackers for children only made up a small fraction of their business, in one case ‘probably five per cent of our market’ (*founder, tracking company 2*), in another ‘sales of probably just under 100’ (*founder, tracking company 6*). Two companies we spoke to had begun marketing trackers for both vulnerable workers and children before giving up on the latter to focus on the former. As one company representative put it: ‘Children is a misnomer market . . . it’s not where the market is. . . Everyone [in the media] talks about it, so you get the impression the world is tracking their children: they’re not’ (*founder, tracking company 3*). Another concurred: ‘I don’t see anyone being overly successful in that space’ (*founder, tracking company 1*). There are several reasons for this. Unlike trackers for vulnerable workers, those for children have lacked powerful and active intermediaries. Few high street

stores stock such products, and even fewer advertise them. The police have remained silent and child protection charities have failed to endorse them. For example, one leading child protection charity cited concerns about 'children's privacy and inappropriate uses of data' and told us: 'we have certainly not been involved in developing tracking devices'.<sup>15</sup> GPS trackers for children have failed, in other words, to generate the climate of assurance and 'talkability' (Molotch, 2005) that enable new goods to secure market penetration. Quite the reverse in fact: The National Society for the Prevention of Cruelty to Children collaborated with Judy Mallaber MP to bring a Private Members' Bill before Parliament which would have established a licensing regime for companies offering child location services.<sup>16</sup>

Concerns about trackers were also expressed by our respondents, many of whom displayed sentiments of 'consumer resistance' (Kline, 2003; Wyatt, 2003) towards this novel security good. Such sentiments reveal the normative boundaries that surround the legitimate use of this technology and the worries about its social consequences – worries that tend to trump any supposed security benefit that GPS trackers may bring. Rather than enable children to be more independent, as developers propose, tracking appears to potential customers as a constraint that hinders childhood development and damages familial relations. Some of the most eloquent responses to such tracking devices involve narratives of resistance, not only to the device itself, but to the general marketing and consumption of children's products seen as unnecessary or deleterious in their social impact. Three connected strands of discomfort can be discerned.

One set of concerns expressed by parents and members of the public (typically grandparents and people without children) focused on the value of a 'sensible' education, understood to be one that strikes an appropriate balance between providing protection for children and fostering their independence. A sensible education includes, among other things, helping children to grow into autonomous individuals who can make wise decisions by themselves. In this context, tracking appears as a hindrance because it reduces responsibility and deprives the child of important learning opportunities. While it is recognized that the device may bring a sense of control and reassurance to parents, it does little to help children learn how to navigate streets and neighborhoods, or deal with strangers. As one interviewee put it, 'We molly-coddle our children far too much now. I've had children who've come home with me and [my son] on the bus who have no road sense. Because they get off the bus and then they're nearly run over because they, you know, they're taken everywhere by their mummy in the car and they never do anything for themselves. And these children are 13, 14' (*mother*

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<sup>15</sup> The one exception to this is the children's charity Kidscape who, despite their worries about 'the false sense of security' offered by trackers and 'human rights issues with older kids', decided to endorse publicly the KidsOK tracker. In return they receive a 'tiny percentage' of the revenue.

<sup>16</sup> The Licensing of Child Location Services Bill was tabled in March 2006 but did not reach the statute book.

*of teenage children*). The worry here is trackers do not help the child, 'to develop as a person' and may serve as an obstacle to what many felt was really required:

I think we should educate our kids and give them the tools to deal with life. Talk about stranger danger but not to alarm them and make them afraid of going out of the front door. Talk about sensible precautions such as sticking together with friends when out. . . Give them self-confidence and the ability to think on their feet, use public transport, make reverse charge calls in emergencies.

*(Participant in online discussion)*

A second concern highlighted the importance of taking a measured, sensible approach towards risk and to consumption aimed at mitigating that risk. According to this view, parents should resist the media and marketing which seeks to encourage needless or excessive consumption. According to the mother of a 13-year-old, the fact that some parents feel pressured to buy certain things for their kids to avoid feelings of inadequacy or failure as a parent is 'absolutely pathetic. I mean, but that's how marketing works isn't it? It plays on peer pressure. It's like shampoo or toothpaste, isn't it? It then becomes the item that everybody must use this week' (*mother of teenage children*). In respect of tracking devices, such resistance took the form of resentment at the idea that caring parenthood might now *require* such a purchase. As one participant in our online discussion put it: 'Why should we track our children? Cos irresponsible groups of people decide to highlight it, that's why. Next they'll have discovered a nice expensive tracking device that parents **MUST** buy if they are to be at all decent' (*emphasis in original*). Among some, this perceived social pressure was resisted by retaining a sober assessment of risk: 'I'm just not interested in that sort of device, because I don't see the threat as being great enough to warrant it . . . Whatever people's perceptions are, Britain is not dangerous in that way. Thirteen-year-olds can play football in the street and not be abducted or interfered with' (*mother of teenage children*). The refusal to purchase tracking devices among parents who have the means to do so indicates that the adoption of new technologies is not reducible to matters of inequality and resource limitations (Wyatt, 2003). It also demonstrates the importance of moral frameworks in shaping consumer decisions and hence markets – operating, in the present case, as a restraint on the take-up of a novel security good (see, generally, Zelizer, 2011).

A third dimension of this moral refusal involves the various ways in which child trackers are implicated in fuelling social fears about children's safety. As a member of a focus group with senior citizens put it: 'I don't agree with them [trackers]. Because I think people are getting paranoid. I think there's no more children abducted now than there was 50 years ago. And people now are paranoid. I think the children these days are being frightened so much they can't go out, they can't do this, they can't do that, mustn't do this, mustn't do that. It's no worse now than when I was a child. It's just the media, the newspapers. Everybody picks it all up and throws it at you.' From this point of view, a worrisome mix of misinformation from the media and the marketing efforts of companies that sell child safety products (now

including trackers) is seen as exacerbating parents' sense of both anxiety and inadequacy – or what several interviewees called 'the guilt trip':

You know, try and make these parents fearful that their children are in danger. You know, that's what the marketing people are doing: 'Protect your child – if you are a decent parent, you would protect your child. There's something wrong with you because you're not worried about your child. You haven't bought our product therefore you're not caring enough'.

*(Member, senior citizens focus group)*

What emerges, then, from our discussions is a disposition that situates the GPS tracking of children within a general tendency towards the overprotection of today's young. From this standpoint, GPS trackers are viewed as an interference with the development of positive and trusting relationships between children and their parents (not least because parents are required either to track their children without their consent or engage in tricky negotiations in order to get them to wear, and then not discard, the GPS locator). They are also seen as reinforcing parental guilt about whether they are doing a 'good enough' job. In short, GPS trackers are set within a cultural frame that depicts them as a poor technological substitute for the daily routines of parental guidance and care. As one parent with now grown up children put it: 'This sort of product I think probably would help parents to be less responsible than they already are.'

These sentiments towards GPS trackers for children are of course taken at a moment in time and at a potentially early point in the 'social life' (Appadurai, 1986) of this product. We cannot be sure that these resistant dispositions will continue to prevail in shaping the meanings and trajectory of child trackers. Nor can we be certain that they will remain impervious to change. Two 'ways into' such change – and into different possible futures - can be discerned from our research. One suggests that concerns about security will, over time, 'trump' the cultural reservations we have identified. This point is best illustrated by the case of Liz. A second suggests that growing familiarity and ease with tracking as a social practice will pave the way for radically greater diffusion of child tracker products. This is the claim made by one of the developers we interviewed, whom we shall call Zoe. Let us describe each possibility in turn.

Liz, the mother of a young boy, shares the disquiet felt by others we interviewed about the social consequences of tracking and the manipulation of anxieties involved in creating a market for child locators. She expresses her concerns thus: 'I hate everything it [the GPS tracker] stands for . . . just this lack of trust in both your child probably and society. And also the fact that companies are going to be making money out of your own fear. And that they're just pouncing on it . . . It wouldn't be hard to do an advertisement for something like that. You know, push a few sort of raw nerves and I don't know, any feelings of guilt that you might have as a parent. And it'd be quite easy to get people to purchase it I think.' She fears, however, that the *availability* of GPS trackers will in time triumph over these reservations,



transforming both her own calculations of risk and protection and, by extension, the social meanings of responsible parenting. She articulates her fears thus:

Once it's offered to you, and once you know it's there, I can imagine myself buying that one, yes. I think you'd have to be really a quite confident person to turn it down as a parent. I don't know, maybe I'm wrong. But the fear of risk is ever present, even though you don't want it to be. Because I'm sure that it's all imposed by the media and that it's no more risky than it was however many years ago. But I don't think I could not have one. . . I think you feel like you have to protect, you have got to do everything you can to protect them. And that [the tracker] is seen as a, as something which potentially could do that. And therefore, by not getting it, you're leaving open a possible danger, where perhaps you could have covered it. It's your own conscience. I would feel that I'd not, by not having done it, and if something was to happen to my son, I'd never forgive myself. . . Whereas if the blooming thing hadn't been invented, it would be awful obviously but you knew that you couldn't have done anything about it. . . . That's how I'd feel anyway.

Liz concludes that she may – reluctantly – end up purchasing a tracker. But she claims she would, at the present time, do so secretly: 'I probably wouldn't tell anyone. That's terrible isn't it?' The general lack of 'talkability' (Molotch, 2005) surrounding security products (goods that for the most part exist outside of the paraphernalia of modern consumer culture – Goold et al. 2010) is reinforced in the case of trackers by the social inappropriateness of the purchase – a disposition Liz feels sure is shared among her circle of mothers ('It's being too much of a control freak, and slightly obsessive'), as well as by her husband – 'He would do absolutely everything he could to prevent me. . . My husband's very anti this kind of thing.' If, as cultural sociologists have found, consumers look to their friends and acquaintances for reassurance about the quality or desirability of certain goods (Di Maggio and Louch, 1998), then at present this is not forthcoming in the case of GPS trackers. Liz's case raises the prospect that trackers will eventually tap into parental anxieties in ways that mean that this lack of reassurance may not matter, or will not last.

Zoe – our developer – also suggests that the cultural reservations we have reported will in future dissipate, opening up a different trajectory for the GPS tracker. She claims that once the technology obtains some kind of foothold – through the success of 'a few devices that work really well' – tracking children will become 'much more normal' and people's initial objections will vanish – just as they did with GPS technology in vehicles: 'People now know what GPS is because all vehicles now have Sat-Nav. But five years ago, you bought a car, it didn't have Sat-Nav.' But Zoe also believes that a wider shift in the practice and meaning of tracking is underway, which will see a growing acceptance of the idea of sharing your location with others: 'We get more used to the idea of other people who we know knowing where we are. We had to get used to the idea of people having our mobile number. We're now used to that, and you give people your mobile number quite openly. When we're used to people knowing where we are, we'll have all kinds of devices which allow other people who we allow,

to know where we are. So my husband won't have to phone me and say "Are you on your way home?" He'll just look and see that I'm on my way home. And people, well their kids will know where their friends are and go and find their friends etc'. As we shall see, in conclusion, there is a growing body of evidence which suggests that this is precisely what has been happening. It is, however, likely to prove bad news for the stand-alone and security-focused GPS tracker.

### **Conclusion: Tracking Devices as Technologies of Care?**

In this paper, we have sought to investigate an episode in the social trajectory of electronic monitoring by describing and making sense of the advent and social impact of the personal GPS tracking device. Why, however, has this been a worthwhile enquiry upon which to have embarked? And what lessons concerning the meaning and future of security might one draw from it?

We have not in this paper set out to write in any direct sense about surveillance (nor about workplace safety or family relations). Tracking is clearly a form of surveillance and GPS technology has created the capacity to extend its scale and reach. However, our concern has been to investigate and analyse GPS tracking, not as a surveillance practice, but through the lens of consumption (Goold et al., 2010). We have, in other words, sought to advance understanding of how and under what conditions individuals and organizations purchase (or refuse to purchase) security commodities. This has meant paying attention to the narratives and social imagery that companies deploy in an effort to generate and sustain demand for protective products (see also, Marx and Steeves 2010). It has also lead us towards a closer, empirically-grounded appreciation of the mentalities and sensibilities that shape the consumption of security commodities, something that has been largely absent from the literature on security and surveillance.

Viewed through the lens of consumption, GPS trackers offer a case study in the marketing and reception of *novel* goods – albeit one that involves technological and social extensions of an established practice. Sellers of such goods not only have to bring them to the attention of consumers and generate sales, they need to seek endorsements and cultural acceptance of their new product. They are required from the outset to reassure 'first adopters' (Molotch, 2005: 16) that this product is socially acceptable. To do so, developers have to 'enroll' the 'fears and enthusiasms' (ibid.: 95) of pioneering consumers by persuading them that old habits and technologies have been rendered obsolete, and that they are blazing a trail that others will follow. In this respect, as Akrich (1992: 208) has pointed out, designers of novel products necessarily 'define actors with specific tastes, competences, motives, aspirations, political prejudices, and the rest, and they assume that morality, technology, science and economy will evolve in particular ways'. These assumptions, which are 'inscribed' into technologies in the form of a 'script', can fit real users' values and beliefs, but can also be

entirely at odds with them and generate resistance. The question that has concerned us in this paper is how these dynamics play out in respect of GPS tracking technologies.

To these general dynamics of novel goods, we need to add two further, more specific, considerations. First, GPS trackers are not just novel goods but novel *security* goods – an apparent instance of what Bauman (2006) calls ‘fear-fighting products’. The question here is whether fear and anxiety operate in the way the critical security literature has tended to assume (e.g., Loader, 1999; Bauman, 2006: ch. 5; Ericson, 2007) – namely, as powerful and even insatiable drivers of consumption. Do anxious consumers turn (and return) to the market in search of the most up-to-date forms of protective gadgetry? Or, conversely, might sellers of novel security goods have to rebut the charge that they are unreasonably stoking social anxieties and trading in things that appeal only to the fearful or paranoid? Secondly, GPS trackers offer an intriguing case of what we have called ‘*indirect* consumption’ (Goold et al. 2010) where the product is purchased by someone acting on behalf – and not necessarily with the consent – of the end user/beneficiary. Given this, the success or failure of GPS trackers is going to depend on their intersection with purchasers’ and users’ dispositions towards questions of risk, trust, autonomy and privacy, and the felt impact of tracking technologies upon these. We have sought to attend to these issues equipped with theoretical antennae attuned to the idea that security goods can ‘catch on’ and succeed, but may also *fail*. This perspective does not take it for granted that markets for security commodities will inexorably result in more commodified and securitized social relations – an outcome that too often tends to be supposed in the social analysis of surveillance (e.g., Bauman and Lyon, 2012; Monahan, 2012).<sup>17</sup>

With these considerations in mind, we have demonstrated that a contradictory set of meanings and trajectories have emerged from early attempts to market GPS tracking technologies. In many ways, the story of tracking devices to date demonstrates that ‘the success or failure of technology adoption may depend as much on how a technology “plays” with the actors involved, as with the inherent advantages of the technology itself’ (Fox, 2011: 71). GPS tracking for lone workers *has* found some consumer traction and public approval. This is not mainly due to the risk and fear of crime, but for a range of wider reasons. Foremost among these are changes in the legal environment (notably, the requirements imposed on employers in respect of corporate manslaughter); the active support of some key ‘intermediaries’ such as public service unions; and a functionality that has made GPS tracking (with a link to human support and real-time evidence-recording) an ‘obvious’ replacement for the mobile phone. For these reasons, GPS trackers have been interpreted by potential buyers as a *medium of care*, a means of demonstrating legal and social responsibility as an employer.

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<sup>17</sup> This structuring assumption is arguably one reason why there are few – if any – studies of failed security commodities. But in remaining open to the possibility that security goods can fail, one might usefully draw comparisons with the study of failed moral panics (e.g. Jenkins, 2009) and unsuccessful attempts at ‘securitization’ (e.g. Salter, 2011).

In contrast, although child trackers were brought to market in a social context rife with concerns about child protection, and arrived with a ready-made and culturally plausible 'script' about risk to children and the peace of mind they can bring to parents, such devices have simply failed to 'catch on.' While some among our respondents could see benefits to the GPS monitoring of children (and took these benefits to be obvious), or were conflicted about how they might transform the social meanings of 'good parenting', trackers generally met in this context with silent or hostile intermediaries and a high level of cultural and moral resistance. Although parents may be anxious about the safety of their children, they are not ready to accept the idea that protecting them requires the purchase of a device that exists only to locate and monitor one's child. This technology does not make parents 'feel at ease, comfortable and secure' (Marx and Steeves, 2010: 214). Rather, GPS trackers are interpreted as a technological *substitute for care*, an abdication of parental responsibility, incompatible with building trust and fostering autonomy in children. They are *not* a form of technology that parents look to as a means of cultivating caring, protective family relations (cf. Turkle, 2011).<sup>18</sup>

It seems, moreover, that child trackers have been superseded by the changing meanings of tracking and by the new generation of mobile phones - for reasons that are germane to the focal concerns of this paper. Today, smart-phones contain sophisticated GPS and wireless technology that allows them to track their user's location and broadcast it to others via mobile data networks. Combined with applications such as Facebook, Google Latitude or Foursquare, users are not only able to share their location with family and friends, but also track the location of others and be alerted when they are nearby. As the use of smart-phones and location-aware social networking services has become widespread, tracking has been (re)coded as a social rather than simply security practice.<sup>19</sup> Tracking is, in other words, being de-securitized in the ways that Zoe, our developer, predicted. But, contrary to her hopes, this is likely to sound the death-knell for the stand-alone personal tracker. In a world in which it is increasingly normal to broadcast one's location to others - and to expect them to do the same - security becomes just one of many reasons to own and use a smart-phone. Such phones also enable individuals who are particularly worried about their security - or that of their children - to pursue their protective goals by means of a socially acceptable purchase. In short, smart-phones deliver the same 'peace of mind' that the GPS tracker offered as its

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<sup>18</sup> In this respect, our research offers some empirical support for the claim made by Rooney (2012: 350): 'The subtleties of such [parent-child] encounters are lost if trust is replaced with a surveillance device, as there become fewer openings for dialogue, less chance to understand and respect the other as a person, and less opportunity to establish a trust-based relationship'.

<sup>19</sup> The two dimensions are of course deeply entangled; but for most people most of the time the security dimensions of tracking are subordinated to the social ones. For example, although 'checking in' at home, a restaurant, or some other place of interest with Google Latitude can be used to reassure anxious family or friends that you have reached your destination safely, for the most part it is simply a way of involving others in one's day-to-day life.

selling point, but in ways that have become enmeshed within a set of social rather than security meanings.

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